

REMARKS

Reconsideration of the present application is requested.

Original claims 1-24 have been replaced by new claims 25-45. New independent claim 25 is based upon a combination of original claims 1 and 3. New independent claim 28 is directed to the device of claim 25 in combination with a pneumatic tire.

The presently claimed invention relates to a device which enables tire deformations to be evaluated, thereby enabling forces acting on the tire to be evaluated (see pg. 4, lines 18-29 of the specification).

Original claim 1 was rejected as anticipated by Christiansson which discloses a device for measuring a load rolling over it (e.g., for weighting trucks). This device uses a dipole made up of a pair of parallel conductive plates (10, 11) squeezing two rubber layers (12, 12a) and having filar electrodes 18 in the middle of the rubber. A capacitive characteristic is measured between the electrodes and the plates and varies according to the squeezing of the sandwich by the passing load.

The fact that the device has several filar electrodes helps in spreading the measuring points but it would work having just one thread 18 or a third plate instead. Using threads instead of a plate allows the sandwich to be squeezed down more easily. Christianson does not disclose measuring the capacitive characteristic between filar electrodes. Rather, due to the presence of plates 10, 11, the capacitive characteristic would not be measured between filar electrodes (threads) as in present claim 1, but rather between a pair of plates and a fork (or a comb) of electrodes. This has particular significance in the case of a pneumatic tire, because

the device of Christiansson would not be able to follow the deformations of the tire due to the inability of the device to bend. Christiansson's device would be more like a pressure sensor, not a deformation sensor.

It should also be pointed out regarding claim 28 that there is no motivation for combining the weighting device of Christiansson with a tire, especially due to the device's huge size, i.e., the Christiansson device is as long as a truck is wide. There is no motivation whatsoever for such a combination.

As regards the claimed combination of Christiansson and Galasko to reject original claim 6 (directed to a tire possessing the claimed deformation-evaluating device), it is noted that Galasko discloses a tire pressure device. This device uses a dipole 14 disposed in a tire crown made up of a pair of parallel conductive plates 14a, 14b squeezing a dielectric layer 14c. A capacitive characteristic is measured between the plates, which varies according to the squeezing of the sandwich by the air pressure. The focus of this patent is on the transmission of power and information between tire and vehicle. The patent does not disclose evaluating tire deformations; does not disclose measuring the capacitive characteristic between filar electrodes; and does not disclose using rubber s a dielectric.

Another of the cited patents is that of Lee which discloses a device that can be fitted as an insert or as a patch in a tire to measure and transmit tire pressure temperature through radio frequencies. This device uses conventional sensors. The focus of this patent is on the transmission of power and information between tire and vehicle. The patent does not disclose evaluating tire deformations and does not disclose measuring a capacitive characteristic.

In light of the foregoing, it is submitted that the application is in condition for allowance.

Respectfully submitted,

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Date: April 18, 2005

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